



MOFFATT & NICHOL

MEMORANDUM

DATE: January 19, 2006
TO: Files
FROM: Ira Brotman, PE
SUBJECT: Pre-application Meeting
Ocean View Beach - Sand Sources

1. A meeting was held on January 12, 2006 to discuss sources of sand for upcoming Ocean View beach renourishment project. The meeting was held at the City of Norfolk's 7th floor conference room. In attendance were:

Name	Phone	e-mail	
Ira Brotman	628-8222	<i>ibrotman@moffattnichol.com</i>	M&N
Ashley Grulich	628-8222	<i>agrulich@moffattnichol.com</i>	M&N
Jim White	664-4624	<i>james.d.white@norfolk.gov</i>	City of Norfolk
Lee Rosenberg	664-4373	<i>lee.rosenberg@norfolk.gov</i>	City of Norfolk
Wayne Webster	664-4647	<i>wayne.webster@norfolk.gov</i>	City of Norfolk
Bert Parolari	518-2166	<i>bwparolari@deq.virginia.gov</i>	DEQ
Mark Kalnins	518-2160	<i>mgkalnins@deq.virginia.gov</i>	DEQ
Tucker Smith	201-7135	<i>Tucker.Smith@nao02.usace.army.mil</i>	COE
Eric Robillard	247-2237	<i>Eric.Robillard@mrc.virginia.gov</i>	VMRC
Tracie West	247-2256	<i>Tracye.West@mrc.virginia.gov</i>	VMRC

2. We began the meeting by going over the City's recent beach nourishment projects over the last 5 years. These projects, totaling approximately 950,000 CY, were to restore eroded dune and beach to give residents and businesses a minimum 5-year storm protection. These recent projects included:
 - East Ocean View – Nov - Dec 2003 – combined w/USACE dredging of Thimble Shoal Channel - 360,000 CY over 1 mile.
 - Central Ocean View to Willoughby Spit Dune Restoration – Two phase project – limited truck haul at critical areas in Sept 2004 – full project construction from Dec 2004 – March 2005 – 504,329 CY placed over approx 3.5 miles of shoreline.
 - Other truck haul emergency projects (pre- and post-Isabel, placement prior to dune restoration) – approx 85,000 CY.
3. The purpose of the meeting was to discuss The City of Norfolk's need for borrow areas for future beach nourishment projects along its Ocean View shoreline. Suitable material in Thimble Shoal Channel has been reduced, by recent projects, and other potential borrow sources need to be identified. In an effort to

prepare for future nourishment along Ocean View and expedite the permitting process, the City warranted a study of existing sediments nearby Ocean View, to best define suitable sites for borrow areas. This study involved a thorough literature review to identify existing sediment data for the area of interest. Relevant data were then analyzed, compiled in a GIS database, and potential sediment areas mapped. The GIS database was used to identify and evaluate potential sediment areas in terms of proximity to Ocean View, potential volume of material available, and compatibility of material with native material along Ocean View.

4. M&N presented a summary of the data collected to determine areas within the lower Chesapeake Bay and offshore that have previously been explored as potential sand borrow sources. Data from eighteen reports, mainly from VIMS and the Corps of Engineers, were input into a GIS database. This amounted to 578 vibracores. The data collected included: grain size (D50), percent sand, percent fines, Unified Soil Classification and general descriptions. It was noted that the data ranged from detailed soil analyses results to hand-written vibracore logs. Map 1 was presented, showing the location of the vibracores, with what report information was obtained from.
5. Map 2 was presented showing general soil description for each vibracore. Descriptions of vibracores are based on classification of materials encountered and available laboratory data, and then assigned a rank with the following general criteria:
 - Green: Material encountered is predominantly sands with some silty sands
 - Yellow: Material encountered has deposits of sandy material, with some layers of silts and/or clays
 - Red: Material encountered is predominately silts and/or clays, or the information obtained was inconclusive.
6. Map 3 was presented showing details of the information available at the Willoughby Bank site.
7. The map showing the Willoughby Banks & Crumps Banks, potential sand source area was shown. This area was presented as being the preferred site due to its close proximity to Ocean View and location suitable for pipeline dredge (lower cost and avoidance of turtle take issues). The area shown on the map is approximately 28 sq mi. It was noted that the area required for borrow is significantly smaller, but the City is interested in discussing which areas within the 28 sq mi are the best potential sites (quality of material with minimum permit concerns). Discussion and issues about using this area for potential borrow was as follows:
8. **Clams.** VMRC stated that the area has known clam beds, and mitigation would be required. 1 ? clams must be mitigated for every 1 clam removed. The Willoughby Banks area has been shown to have approximately 4 clams per sq m, elsewhere in Crumps Banks may be 0.5 to 1 clam per m². Traycie discussed that MAERSK had to mitigate for clam losses for their port project on the Eliz. River. VMRC has a GIS map of clam density that we can obtain.

- Follow-Up: Ira to get mitigation to try and get approximate mitigation costs from VMRC.
9. **Crabs.** Blue crabs flock to deeper holes in the winter. Dredging during the winter should be avoided – mitigation is a possibility. This would be an issue if dredging for borrow leaves a deep hole that would attract crabs.
 10. **Horseshoe Crabs.** VMRC mentioned that a new issue on the horizon is horseshoe crabs. New Jersey may be setting a moratorium on horseshoe crabs. Horseshoe crabs are used as bait for conch/welks. Horseshoe crabs lay their eggs on the beach
 11. **Birds.** The main issue for birds (terns and skimmers) is the placement of the fill, not the location of the dredging. Bird issues are reviewed by U.S. Fish and Wildlife Services and VA Department of Game and Inland Fisheries.
 12. **General.**
 - Deep holes can be permitted by confirming the hole left will not lead to an anoxic condition. This was done for Buckroe Beach. Traycie offered to make the Buckroe Beach permit files available to the City and/or M&N to review – since the issues for using the area off of OV would be similar.
 - Anadromous fish will not be an issue.
 - Dredging along the edge of the navigation channel could be beneficial.
 - VMRC mentioned that any area should steer clear of any public oyster grounds (would need an act of the General Assembly to work in these areas).
 - Avoiding the shallower area of Willoughby Banks would minimize impacts to clams and crabs.
 13. **Thimble Shoal Channel (TSC).** There was discussion of including TSC in the permit. This would be an area outside of the federal channel limits, in an area shown to have beach quality sands. The agencies would prefer to evaluate both borrow sources in the same permit. Turtle takes would be the main issue with obtaining a permit around TSC. The agencies saw no disadvantages to including both areas (off of OV Beach and TSC) in the permit. Having both areas permitted would avoid impacts during time of year restrictions (i.e. turtles and crabs).
 14. **Permit.** The only “document” the City needs to submit would be the JPA and any associated information associated with the JPA. The permit needs to include a complete project (i.e., dredging of borrow area and placement on the beach), the agencies will not permit a borrow area without a necessary placement project.
 15. **Schedule.** Beach nourishment and dune restoration for Ocean View is anticipated for the winter of 2006-2007.
 16. Maps presented at the meeting are attached.









